

October 9, 2014 Meeting Agenda

I. Position/Officer Reports

- N/A

II. Old Business

- Snowflake Hardware and Parafoil should be arriving here next week
- Read the email chain to find out more - I only had time to skim through it

III. New Business

- Want to swap out Monkey board or Arduino Pro Mini for arduino Mega Pro board
 - Same pins as Arduino Mega 2560 board
 - Might be too big too fit in 1U? It is about 10.2 cm long
 - 15 PWM ports
 - 4 UARTS (serial ports)
 - 3.3V and 5V varieties
 - 10 bit analog inputs - can use for 10 bit resolution pressure, temperature, etc data
- Need to plan a date to work on Snapshot
 - If parafoil/brains aren't here by Monday we should ask if we can borrow similar Near Space Engineering hardware for an hour or two for it
- Review Feng Li's comments on our Portfolio
- Possibly discuss log book comments and grading

IV. Design Discussion

- ECE: begin looking into how the sensors interface with the microcontrollers
 - Check out potential temp/pressure sensors that we could use with up to 10 bit (1024) resolution (I believe most of them are analog output. PWM could work too since we have extra ports - PWM is 8 bit, 256 "level")
 - Look into capabilities of arduino
- CS: look into programming and SOUP for interfacing with hardware
 - Start looking into what libraries are required
- ME: Begin researching how the "moving parts" interface with the microcontrollers
 - Look into various methods of keeping the thermals between about -5* C to 20+* C
 - Thermal insulation
 - Batteries w/ resistors to generate heat
 - Handwarmers (chemical generation)

V. Goals for Next Meeting

- Have a better understanding of the project
- Preliminary design specifications

VI. Coming deadlines

- October 14 - **SNAPSHOT #1**
- October 31 - Mid-semester Wiki page